### University Core Requirements:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>#Classes</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion Cornerstones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
</tr>
<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
<td>1</td>
<td>2.0</td>
<td>REL C 250</td>
</tr>
<tr>
<td>Foundations of the Restoration</td>
<td>1</td>
<td>2.0</td>
<td>REL C 225</td>
</tr>
<tr>
<td>The Eternal Family</td>
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<td>2.0</td>
<td>REL C 200</td>
</tr>
<tr>
<td>The Individual and Society</td>
<td></td>
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</tr>
<tr>
<td>American Heritage</td>
<td>1-2</td>
<td>3-6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Global and Cultural Awareness</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year Writing</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Advanced Written and Oral Communications</td>
<td>1</td>
<td>3.0</td>
<td>WRTG 316</td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
<td>1</td>
<td>4.0</td>
<td>MATH 112* or 113*</td>
</tr>
<tr>
<td>Languages of Learning (Math or Language)</td>
<td>1</td>
<td>4.0</td>
<td>MATH 112* or 113*</td>
</tr>
<tr>
<td>Arts, Letters, and Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civilization 1</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Civilization 2</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Arts</td>
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<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Letters</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Biological Science</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Physical Science</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Social Science</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Core Enrichment: Electives</td>
<td></td>
<td></td>
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<tr>
<td>Religion Electives</td>
<td>3-4</td>
<td>6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Open Electives</td>
<td>Variable</td>
<td>Variable</td>
<td>personal choice</td>
</tr>
</tbody>
</table>

### Graduation Requirements:

- Minimum residence hours required: 30.0
- Minimum hours needed to graduate: 120.0

### Suggested Sequence of Courses

#### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>1st Semester</th>
<th>2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>C S 142</td>
<td>C S 224</td>
</tr>
<tr>
<td>First Year Writing or American Heritage</td>
<td>First Year Writing or American Heritage</td>
</tr>
<tr>
<td>MATH 112</td>
<td>MATH 113</td>
</tr>
<tr>
<td>General education courses, university requirements, and/or general electives</td>
<td>General education courses, university requirements, and/or general electives</td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>Religion Cornerstone course</td>
</tr>
<tr>
<td>Total Hours: 15.0</td>
<td>Total Hours: 15.0</td>
</tr>
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</table>

#### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>3rd Semester</th>
<th>4th Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>C S 240</td>
<td>C S 240</td>
</tr>
<tr>
<td>Letters</td>
<td>Letters</td>
</tr>
<tr>
<td>Civilization 1</td>
<td>Civilization 1</td>
</tr>
<tr>
<td>MATH 213</td>
<td>MATH 213</td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>Religion Cornerstone course</td>
</tr>
<tr>
<td>Total Hours: 14.0</td>
<td>Total Hours: 14.0</td>
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</table>

#### JUNIOR YEAR

<table>
<thead>
<tr>
<th>5th Semester</th>
<th>6th Semester</th>
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</thead>
<tbody>
<tr>
<td>C S 312</td>
<td>C S 324</td>
</tr>
<tr>
<td>C S 472</td>
<td>CS 482</td>
</tr>
<tr>
<td>First Year Writing or American Heritage</td>
<td>First Year Writing or American Heritage</td>
</tr>
<tr>
<td>MATH 330 or ECON 388</td>
<td>MATH 330 or ECON 388</td>
</tr>
<tr>
<td>General education courses, university requirements, and/or general electives</td>
<td>General education courses, university requirements, and/or general electives</td>
</tr>
<tr>
<td>Religion Cornerstone course</td>
<td>Religion Cornerstone course</td>
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<tr>
<td>Total Hours: 15.0</td>
<td>Total Hours: 15.0</td>
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</table>

#### SENIOR YEAR

<table>
<thead>
<tr>
<th>7th Semester</th>
<th>8th Semester</th>
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</thead>
<tbody>
<tr>
<td>C S 474</td>
<td>C S 475</td>
</tr>
<tr>
<td>C S 494 - DS Capstone 1 or CS elective</td>
<td>MATH 316</td>
</tr>
<tr>
<td>WRTG 316</td>
<td>Arts</td>
</tr>
<tr>
<td>General education courses, university requirements, and/or general electives</td>
<td>General education courses, university requirements, and/or general electives</td>
</tr>
<tr>
<td>Religion Elective</td>
<td>Religion Elective</td>
</tr>
<tr>
<td>Total Hours: 16.0</td>
<td>Total Hours: 16.0</td>
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</tbody>
</table>

- BS in Computer Science: Data Science (693224) MAP Sheet
- Physical and Mathematical Sciences, Computer Science
- For students entering the degree program during the 2021-2022 curricular year.
**BS in Computer Science: Data Science (693224)**

**2021-2022 Program Requirements (74 Credit Hours)**

### REQUIREMENT 1
Complete 12.0 hours from the following course(s):

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra
- **Math 216**: Computational Linear Algebra
- **WRTG 316**: Technical Communication

### REQUIREMENT 2
Complete 4 courses:

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra

### REQUIREMENT 3
Complete 1 option:

- **Math 313**: (Not currently offered)
- **Math 315**: Advanced Linear Algebra

### REQUIREMENT 4
Complete 1 course:

- **STAT 121**: Principles of Statistics
- **STAT 201**: Statistics for Engineers and Scientists

### REQUIREMENT 5
Complete 1 course:

- **ECON 388**: Introduction to Econometrics
- **ECON 389**: Advanced Econometrics

### REQUIREMENT 6
Complete 3.0 hours from the following course(s):

- **C S 412**: Linear Programming and Convex Optimization
- **C S 417**: Statistics for Economists
- **C S 438**: Introduction to Econometrics
- **ECON 488**: Applied Econometrics
- **LING 581**: Natural Language Processing
- **Math 314**: Calculus of Several Variables
- **Math 413**: Advanced Linear Algebra
- **Stat 240**: Probability and Inference 1
- **Stat 251**: Introduction to Bayesian Statistics
- **Stat 340**: Probability and Inference 2

### REQUIREMENT 7
Complete 12.0 hours from the following course(s):

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra
- **WRTG 316**: Technical Communication

### REQUIREMENT 8
Complete 4 courses:

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra

### REQUIREMENT 9
Complete 3.0 hours from the following course(s):

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra

### REQUIREMENT 10
Complete 1 course:

- **ECON 388**: Introduction to Econometrics
- **ECON 389**: Advanced Econometrics

### REQUIREMENT 11
Complete 1 course:

- **LING 581**: Natural Language Processing
- **Math 314**: Calculus of Several Variables
- **Math 413**: Advanced Linear Algebra
- **Math 415**: Fundamentals of Information Retrieval
- **Math 418**: Applied Econometrics
- **Stat 240**: Probability and Inference 1
- **Stat 251**: Introduction to Bayesian Statistics
- **Stat 340**: Probability and Inference 2

### REQUIREMENT 12
You may take this course up to 1 time:

- **Math 313**: (Not currently offered)
- **Math 315**: Advanced Linear Algebra

### REQUIREMENT 13
Complete 1 course:

- **Math 313**: (Not currently offered)
- **Math 315**: Advanced Linear Algebra

### REQUIREMENT 14
Complete 3.0 hours from the following course(s):

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra

### REQUIREMENT 15
Complete 6 courses:

- **Math 112**: Calculus 1
- **Math 113**: Calculus 2
- **Math 213**: Calculus of Several Variables
- **Math 215**: Elementary Linear Algebra

### REQUIREMENT 16
Complete 1 course:

- **ECON 388**: Introduction to Econometrics
- **ECON 389**: Advanced Econometrics

### REQUIREMENT 17
Complete 1 course:

- **LING 581**: Natural Language Processing
- **Math 314**: Calculus of Several Variables
- **Math 413**: Advanced Linear Algebra
- **Math 415**: Fundamentals of Information Retrieval
- **Math 418**: Applied Econometrics
- **Stat 240**: Probability and Inference 1
- **Stat 251**: Introduction to Bayesian Statistics
- **Stat 340**: Probability and Inference 2

### REQUIREMENT 18
Complete Senior Exit Interview with the Computer Science department during last semester or term.

### Note
Math 112, Math 113, Phscs 121, Engl 316, and C S 312 can be used to fill both General Education and program requirements. Advanced Writing and Oral Communication: Engl 316. Quantitative Reasoning: Math 112 or 113. Languages of Learning: Math 112 or 113. Physical Science: C S 312 or Phscs 121.
BS in Computer Science: Data Science (693224)  
2021-2022 Program Requirements Cont...

MAP DISCLAIMER
While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

DEPARTMENT INFORMATION
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Brigham Young University  
3361 Talmage Building  
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Telephone: (801) 422-3027

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Brigham Young University  
N-181 ESC  
Provo, UT 84602  
Telephone: (801) 422-2674